



--	--	--	--	--	--

--	--	--	--	--	--	--	--	--

0178/01
May/June 2025
1 hour
Marks: 60

Candidates answer on the Question Paper.

Additional Materials: Geometrical Instruments
Tracing paper (optional)

READ THESE INSTRUCTIONS FIRST

Write your name, centre number and candidate number in the relevant spaces provided at the top of this page.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

Answer **all** questions.

ELECTRONIC CALCULATORS MUST NOT BE USED IN THIS PAPER.

If working is needed for any question, it must be shown below that question.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **11** printed pages and **1** blank page.



Examinations Council of Lesotho

1 Work out.

(a) $\frac{2}{5} - \frac{1}{6}$

..... [1]

(b) $1.25 \div 0.5$

..... [2]

2 Evaluate.

$\frac{1}{10} \times 6 \div 30\%$

..... [2]

3 Express 605 as a product of its prime factors.

..... [2]

4 Write $33\frac{1}{3}\%$ as a fraction in its simplest form.

..... [2]

5 $v^2 = u^2 + 2ax$

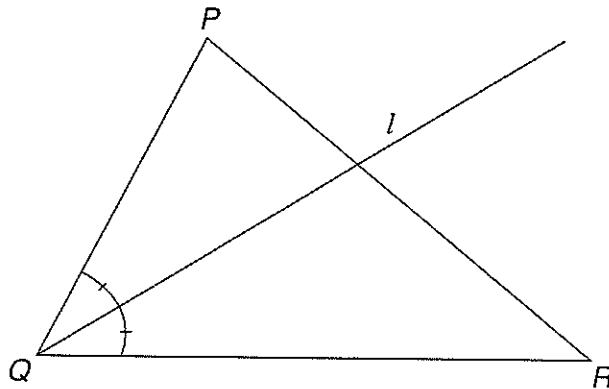
(a) Find v when $u = 8$, $a = 4$ and $x = 10$.

$v = \dots\dots\dots$ [2]

(b) Make a the subject of the formula.

$a = \dots\dots\dots$ [2]

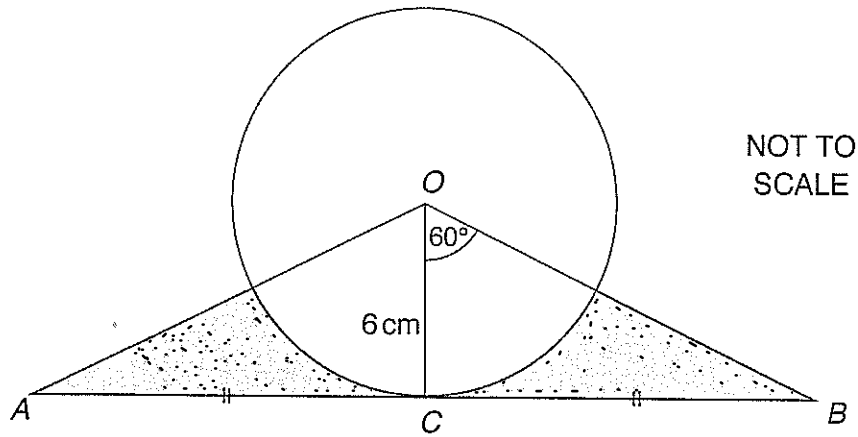
6 The diagram shows the triangle PQR and the line l .



Describe the locus represented by line l .

.....
 [2]

- 10 The diagram shows a circle of radius 6 cm, centre O .
 The line AB is a tangent at C .
 It is given that the length of AB is approximately 22 cm.
 Angle $BOC = 60^\circ$ and $AC = CB$.



Find the area of the shaded region in the form $a + b\pi$, where a and b are integers.

..... [3]

- 11 (a) Work out and leave your answer in standard form.
 $3.2 \times 10^8 - 1.5 \times 10^7$

..... [2]

- (b) Work out.

$$\left(1\frac{7}{9}\right)^{\frac{1}{2}}$$

..... [2]

- 12 A car travels 75 km in 1 hour 15 minutes.

Calculate the speed of the car in km/h.

..... km/h [3]

- 13 Solve the equation.

$$3x - 1 = 11$$

$x =$ [2]

- 14 Solve the simultaneous equations.

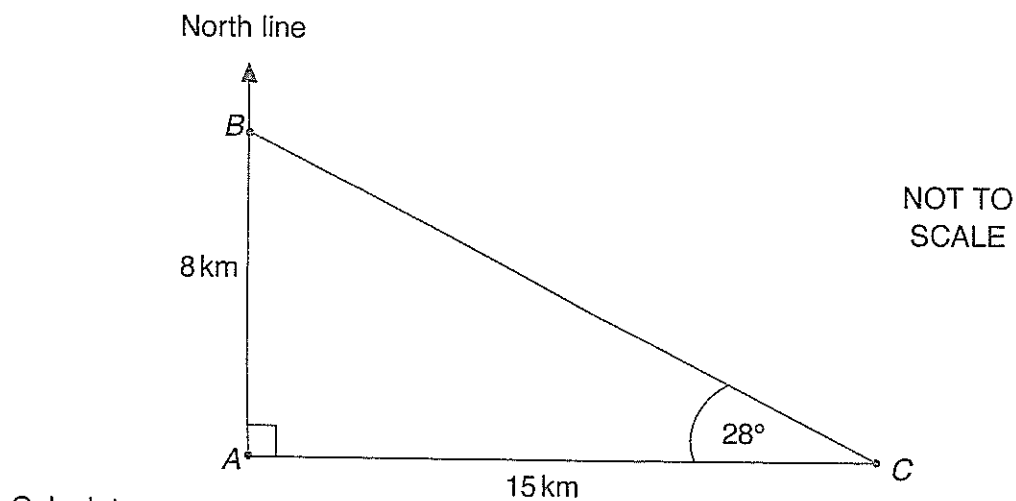
$$2x = \frac{1}{3}y$$

$$y = 9x - 3$$

$x =$

$y =$ [3]

- 15 The diagram shows a right-angled triangular land ABC .
 Angle $ACB = 28^\circ$.
 $AC = 15$ km and $AB = 8$ km.



Calculate

- (a) the length of BC ,

.....km [2]

- (b) the bearing of C from B .

.....° [2]

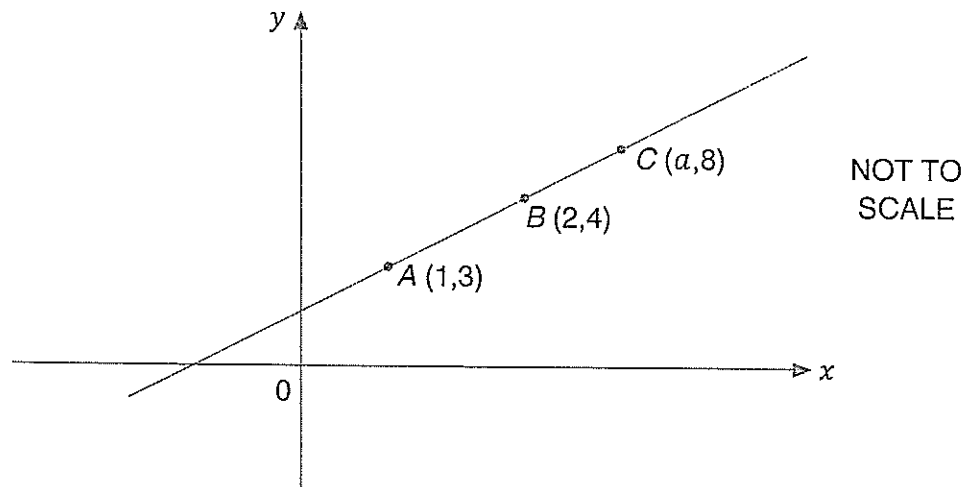
- 16 The table shows the number of animals owned by Mr Sandile and their pie chart sector angles.

animal	frequency	pie chart sector angle
cows	12	120°
sheep	18	180°
horses	4	
donkeys	2	

Complete the table.

[3]

- 17 The diagram shows a straight line which passes through the points $A(1,3)$, $B(2,4)$ and $C(a,8)$.



Find

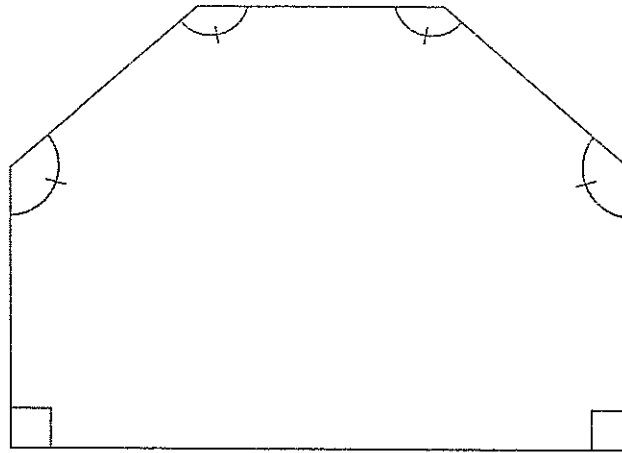
- (a) the length of line segment AB and leave your answer in the form $\sqrt{l}$,

.....units [2]

- (b) the x coordinate of C .

..... [2]

- 18 The diagram shows hexagon with two right angles and the other four equal angles.

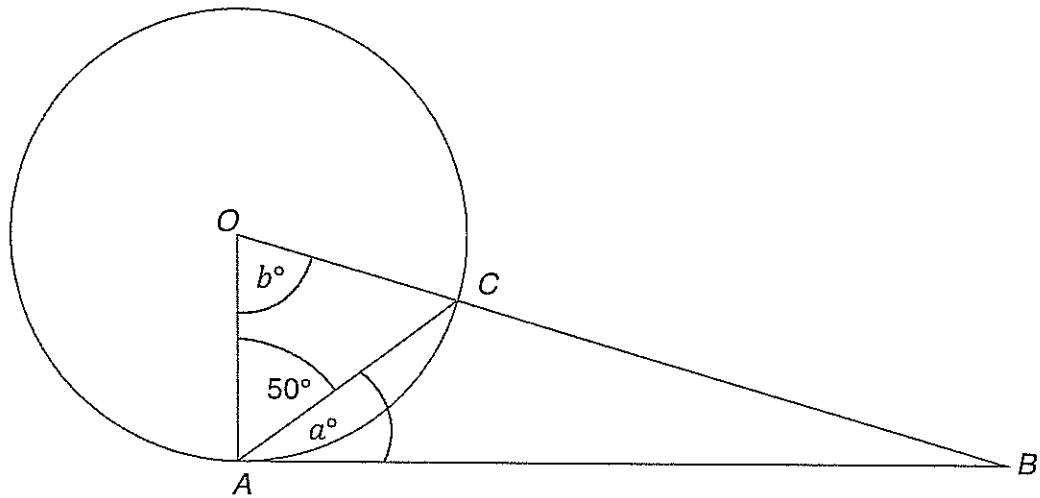


NOT TO
SCALE

Calculate the size of one of the four equal angles.

.....° [2]

- 19 The diagram shows a circle with centre O .
Angle $OAC = 50^\circ$ and AB is a tangent to the circle at A .
 OB is a straight line.



Find

- (a) the size of a° ,

$a = \text{.....}^\circ$ [1]

- (b) the size of b° .

$b = \text{.....}^\circ$ [1]

Blank page

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (ECoL) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.